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ABSTRACT

A study investigated how Chinese characters (hanzi) were taught and learned in a first-year Chinese language class in an American university. Traditionally the teaching of hanzi in higher education has taken one of four approaches: radical; high-frequency-hanzi; phonetic; and non-teaching. The four approaches are analyzed from the second language acquisition perspective, focusing on first-to-second-language transfer and orthographic depth effects in comparing native Chinese learners and second language learners of Chinese. Subjects were 15 university students. Data were collected using participant observation, interviews, and a survey. Research questions included: (1) the approach/belief the teacher follows, and the relationship between that approach and teaching techniques; and (2) the learning strategies adopted by students. Results and their pedagogical implications are reported. The student background questionnaire, student strategy-use questionnaire, teacher questionnaire, and a summary of results are appended. Contains 88 references. (MSE)

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A Study on the Learning and Teaching of Hanzi - Chinese Characters

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The study presented in this paper examines how Chinese characters, hanzi, was taught and learned in a first-year Chinese language class in a major American university. The teaching of Chinese in an American context to students of non-Chinese ethnic background is relatively new since the 60s (Moore, Walton, and Lambert, 1992). Traditionally the teaching of Chinese characters in a university setting has taken one of the following four approaches: the radical approach, the high-frequency-hanzi approach, the phonetic approach, and the non-teaching approach. This paper analyzes the four approaches from second language acquisition perspective, specifically the L1-L2 transfer and orthographic depth effects in comparing native Chinese learners and second language learners of Chinese. In this study, participant observation, interview, and survey were used to collect data. Answers to the following researcher questions were searched: (1) what approach/belief does the teacher under study follow? What is the relationship between her belief and her teaching? and (2) what learning strategies do students of this class develop and adopt in studying hanzi? Some pedagogical implications were also discussed in view of the findings of the study.

INTRODUCTION

In recent years, due to the rise of the economic and political influence of Taiwan, Hong Kong, Singapore, and the People's Republic of China, the Chinese language has enjoyed an increased popularity as a subject of second/foreign language (CSL/CFL) study in the States. However, because of its non-alphabetic writing system, in addition to its tones in pronunciation, the Chinese language has had a reputation of being difficult. While many students are attracted to Chinese because of the Chinese characters, called "hanzi," many more students are afraid of studying the language for the same reason. The learning and teaching of hanzi thus present a great challenge to students and teachers alike.

This paper, therefore, examines some aspects of the learning and teaching of hanzi to students of language backgrounds other than character-

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based orthographic system. By conducting a study in a first-year Chinese language class in a major American university, I intended to find out how hanzi is taught and learned in a classroom situation. I was also interested in finding out if classroom interaction can improve the teaching and learning of hanzi. Based on the findings of this study, I shall discuss some pedagogical implications and thus, hope to make a small contribution to the research and teaching of Chinese as a second/foreign language.

Popular Assumptions about the Teaching of Hanzi

Different teachers hold different assumptions on how hanzi should be taught and learned. Traditionally, there are four prevailing approaches to teaching/learning hanzi in the CSL/CFL context. The first approach suggests that teachers should teach students hanzi by emphasizing radicals, the semantic indicator that usually appears on the left side of a compound hanzi (Liu 1983; Pye and Itoo 1979 cited in Horodeck 1987). One main reason is that radicals and number of strokes are how traditional Chinese dictionaries are arranged; learning radicals will help students know how to look up a new word. Another reason is that radicals often give clues to the meaning of the hanzi. Liu (1983) specifically suggests teaching xingsheng (phonetic compounds, usually with radicals on the left and phonetic indicator on the right side) first so that students can learn them with relative ease through the radicals to grasp the semantic-ideograph relationship, then the phonetic indicative should be emphasized as well because it sometimes gives clues to the pronunciation of the whole hanzi. For example, in 爆 (bao), the radical is 火 (huo, fire), and the phonetic is 暴 (bao, sudden and violent); therefore, 爆 is *bao*,"to explode," a sudden burst of fire.

This teaching approach of emphasizing the semantic function as primary in hanzi is being criticized on two grounds. One is that many xingsheng hanzi are not high-frequency words/morphemes. When they are rarely used in real-life contexts, they are not reinforced and are thus easily forgotten (Horodeck 1987). The second problem is that, in high frequency hanzi, both the phonetic indicators and radicals are unreliable clues (DeFrancis 1984). As an alternative, the proponents of the second approach advocate that the most beneficial way for beginners to learn hanzi is to start with a small number of high frequency hanzi and ignore either the radical or the phonetic (DeFrancis 1984; Jordan 1962). They argue that once learners have learned a "critical mass" of hanzi, they will be able to analyze hanzi by radicals or phonetics, thus utilizing their accumulated knowledge of hanzi and their relationship with radicals and phonetics to advance their study and the hanzi reading/writing skills. However, it needs to be pointed out that, so far, there has not been much research on the number of hanzi that constitutes the "critical mass" as suggested by many teachers of Chinese.

The third approach advocates that beginning CSL/CFL learners should

be introduced to a small number of high frequency hanzi first, and that the sound value of these hanzi should be stressed as being primary (Horodeck 1987; Li 1981). Much research in psycholinguistic and cognitive psychology (Tzeng 1980; Tzeng & Hung 1980; Horodeck 1987) supports that phonological recoding is automatically and inevitably a part of reading no matter what orthography is read and how deep it might be (Frost et al. 1987, see the next section). While the argument for this approach is appealing, nevertheless, the supportive evidence shows the product of phonological mediation of hanzi recognition. How the phonological mediation aids the processing mechanism of hanzi recognition or production has yet to be determined.

In addition to these three popular and much debated approaches, there is another prevalent yet silent approach in the field. That is, the "non-teaching" of hanzi. It is believed that hanzi must be internalized by learners themselves, a task that must be tackled through individual effort and rote-memorization. In light of the time constraint of the classroom and the difficulty of acquiring the language, the task of learning/studying hanzi is usually assigned to students as homework. Furthermore, the notion of "critical mass" is commonly held to the extent that many teachers do not require students to do anything with hanzi before such a mass is accumulated. The result is that students are left on their own with the most difficult aspect of learning the Chinese language. There is hardly any wonder that students realize the task of learning hanzi is labor-intensive and time-consuming, which also demands a huge amount of memories and study capabilities (Everson 1998).

L1-L2 Transfer and Orthographic Depth Effects

Each of the approaches mentioned above focuses on how teachers should teach, without taking into account how students learn hanzi. Many studies in second language acquisition have demonstrated that language transfer does take place (for review, see Gass 1996). However, given the fact that the writing systems of Chinese and English are not related, is there any linguistic transfer for English speakers who study Chinese? Before this question can be answered, some understanding of what takes place for a native speaker of English or Chinese to process word recognition in their native language will be helpful.

In her review of the second language word recognition studies, Koda (1996:452) cited Seidenberg and McClelland's (1989) connectionist model that describes the word recognition and skill acquisition processes of native English speakers. According to this model, the orthographic knowledge of native speakers of English is an elaborate matrix of correlation among letter patterns, phonemes, syllables, and morphemes. Through repeated processing experience in the English writing system, native speakers gain literacy by forming interletter associative networks. The more and

faster a speaker internalizes the interletter relationship in words, the more proficient a reader he/she becomes. When a pattern of letter-sequence combination is activated frequently, the connection that holds it together becomes stronger. This is the reason why high frequency words are better acquired than low frequency words, and real words are easier to process than pseudo words which, in turn, are easier than nonsense words.

But how do Chinese speakers process hanzi recognition? Besides the obvious difference in script, English and Chinese writing systems also differ in two aspects: their representational units and their orthographic depth. First, in English, the linguistic unit is represented through its phonemes, whereas as in Chinese, it is through monosyllabic morphemes (Tzeng & Hung 1980; Horodeck 1987). Second, Chinese is considered as a deep orthographic language, while English is not as deep. The orthographic depth hypothesis (ODH), proposed by Frost, Katz & Bentin (1987), states that the extent to which the writing system represents phonology, i.e., the regularity in sound-symbol correspondence, may be deep or shallow from language to language. Serbo-Croatian is considered a shallow orthographic language because its orthographic code is isomorphic with its phonological code, and Chinese and Hebrew are considered deep, while English is somewhere in between. Many cross-linguistic studies (see Koda 1996 for review) have provided evidence to the hypothesis of ODH that the more shallow orthographies are, the more phonological (i.e., prelexical) coding can be generated from print, whereas the deeper orthographies are, phonology is retrieved through lexical (i.e., postlexical) coding (Frost et. al. 1987; Chikamatsu 1996: 407). Word recognition in Chinese is further complicated by the fact that recognizing individual hanzi does not necessarily guarantee recognition of the whole word, which is usually a compound of two or three single hanzi (morphemes) bound together.

The results of some empirical studies have shown that perceptual abilities are more involved in reading the Chinese script. The configuration of the Chinese script as its script-sound and script-meaning relations can differentially affect perceptual processes. Various studies also show that visual code plays a greater role in memory of Chinese compared with English (Chen & Juola 1982; Turnage & McGinnes 1973; Tzeng 1982; Tsou 1986; Ji and Luo 1989; Hue & Erickson 1989). Taken together, these studies suggest that there may be a stroke order, graphemic, phonological, and morphological interrelationship within individual hanzi, similar to the correlation among letter patterns, phonemes, and syllables in English words described in Seidenberg and McClelland's model (1989).

However, although these studies generally support the theory that the Chinese orthographic system involves more visual coding processing as predicted by ODH, some empirical studies present different results. For example, Hue (1992) and Cheng (1992: 67-91) conducted character naming/lexical-decision experiments. They both conclude that phonological information represented in scripts are used in processing the scripts, and

reading Chinese requires phonological mediation. Another study conducted by d'Arcais (1992) also refuted the notion that hanzi are processed more "like pictures" than like words. In addition, he argues that when the task requires naming the hanzi, phonological information seems to become available prior to the full availability of semantic information, not afterwards. Horodeck's study (1987) on native speakers of Japanese shows evidence that native speakers associate kanji primarily with sounds when they read or write.

These studies on hanzi are hardly conclusive; however, they do offer some windows to the mechanism of hanzi processing, especially in native speakers of Chinese or Japanese. Hoosian posits that hanzi processing mechanism is a bottom-up process (Hoosain 1991: 60), in which each hanzi requires more individualized phonological, semantic, as well as visual-scanning experience. Although words are usually coded phonologically, the visual-spatial processing as well as psycho-motor code plays a more central role, compared with other languages. Words are units of memory whose morphological and orthographic information are stored somewhat differently than with English.

In summary, although none of the experiments were conducted to test the efficacy of any of the teaching methods mentioned in the earlier section, the results do support each teaching approach in a special way. For example, Ji and Luo (1989), Tsou (1986), and Hue and Erickson's (1988) studies showed that stroke orders were important, and radicals and phonetic components that frequently appeared in hanzi enhanced the recall of hanzi containing these parts. The claim of the first teaching approach which emphasizes the use of radicals and phonetic components as organizing principles is thus supported. However, the fact that radicals and phonetic parts activate not only semantic meaning, but also offer visual clues to hanzi recognition indicates that high frequency appearance of radicals/phonetic part/hanzi is an important factor in short-term and long-term memory and retrieval. This points to the support of the second approach of teaching high frequency hanzi. Coincidentally, D'Arcais (1992) and Horodeck's (1987) studies indicate that phonological mediation is particularly helpful to the recognition of hanzi. Hence, the claim of the third teaching approach which emphasizes phonological encoding is validated.

It is important to note that all the research cited above is conducted on native speakers of Chinese or Japanese. For these speakers, (1) hanzi processing relies heavily on visual coding, and (2) hanzi processing also involves phonological mediation. Equally important is the fact that none of the teaching methods may be better or more effective than the others, because each addresses only partial phenomena of the hanzi processing mechanism in native speakers of Chinese. The question now is, how do learners of different orthographic writing system process hanzi? What is the L1-L2 transfer effect?

In reading and cognitive psychology, many researchers are interested

in the effect of orthographic differences on visual information processing. The hypothesis is that reading different writing systems of various orthographic depths may entail different processes (Gibson 1975: 163-164; Tzeng 1981: 237-238). Based on reviews of various findings in literature and from the results of their own experiments, Tzeng and Hung (1980) posit that orthographic variations affect cerebral processing, memory functions, problem-solving strategies, lexical access pathways, and the lexical organization of bilingual subjects. Koda (1996) points out, based on the results of two cross-linguistic research (Koda 1989b; Muljani et al. in press), that superior word recognition performance has been consistently demonstrated by learners whose L1 and L2 orthographic systems are related and similar. Koda thus hypothesizes that L2 learners with divergent L1 backgrounds would utilize qualitatively different processing procedures during L2 processing (Koda 1996: 468).

Chikamatsu's (1996) study on the effects of a L1 orthographic system on L2 word recognition strategies supports such hypothesis. Forty-five American and seventeen Chinese college students who were enrolled in the second semester of a Japanese language course at an American university participated in the study. The results indicated that English subjects utilized the phonological information in Japanese kana words more than did Chinese subjects whereas Chinese subjects relied more on the visual information in L2 Japanese kana words than did English subjects. In the context of CFL, Everson (1998) also demonstrates that beginning students of Chinese already develop a strong relationship between knowing a word's meaning and knowing its pronunciation. His finding coincides with that of Chikamatsu's (1996) study and support the hypothesis that American students transfer their L1 processing strategy of relying on phonological mediation to process L2 orthography, whether they are Chinese hanzi or Japanese kana. The question now is what optional strategies do learners of CSL/CFL possess in order to acquire hanzi?

The Study

So far, I have delineated popular assumptions about the teaching of hanzi. In discussing L1-L2 transfer and orthographic depth effects, I cited various empirical studies from first language acquisition of Chinese and Japanese as well as studies on L1-L2 transfer of reading different orthographic systems. I am interested in finding out if teachers teach in the way described above and how students learn hanzi despite what the research indicates. My research questions are as follows:

(1) What approach/belief does this teacher take? What is the relationship between her belief and her teaching? and
(2) What learning strategies do beginning students of Chinese develop and adopt?

In order to find out what methods teachers use and what strategies

students develop with regard to hanzi acquisition, I conducted a qualitative study over a period of ten weeks. Questionnaires, interviews, participant observation, and field notes were used, and classroom teaching materials and homework assignments were also collected.

Subjects and Setting

A first-year, second-semester, non-intensive, Chinese Mandarin class designed specifically for students of non-Chinese background at an American university was selected for two reasons. First, these students' native orthographic systems are not related to Chinese. Second, students in their second semester of studying Chinese should have already developed their strategies to study hanzi.

There were fifteen students in this class: five female and ten male students. They met Monday through Thursday for 50 minutes per day. The textbook used was Practical Chinese Readers, Vol. 1 (Beijing Language Institute 1990), which will be finished in two semesters. The teacher of this class was Lin Laoshi (Teacher Lin, a pseudonym), who had established a routine with the class. Generally speaking, one lesson was taught in six days, starting with the learning of vocabulary, oral reading of the text, grammar instruction and drills, then going over exercises and review before the lesson test. There were five written and oral tests, given alternately every week. None of the tests was cumulative, i.e. they only covered the material taught in the lesson, not including previous lessons.

As far as hanzi was concerned, the goal of the course was to learn 300 hanzi by the end of the semester; i.e. a total of 600 hanzi in the first year. As a way to help students achieve this goal, each week the teacher would distribute a hanzi homework packet. It included hanzi worksheets with which students had to (1) copy each new individual hanzi; (2) translate sentences from English to hanzi and pinyin (a Romanized pronunciation system for Mandarin Chinese); (3) fill in blanks with hanzi; (4) re-arrange scrambled phrases into coherent sentences; and (5) answer questions which were written in hanzi. However, except for item (1) in which copying hanzi was required, students were allowed to use pinyin to finish their homework in items (2) through (5). On each Monday, students had to turn in hanzi homework and took a quiz on hanzi that were assigned for the previous week.

The format of hanzi quizzes was very simple in that students only had to fill out either hanzi, pinyin, or English definition according to the clues provided. In other words, hanzi quizzes assessed students' ability to memorize and produce newly introduced, isolated hanzi at the time of the quiz.

Data Collection

Questionnaires were used to provide basic answers to the research questions. There were two questionnaires for students: one on their background

information and the other on their strategy use. The students' background questionnaire (Appendix A) was designed to find out their language learning experience, perceptions and beliefs about the Chinese language, and their goals and purposes for studying Chinese. The strategy-use questionnaire (Appendix B), on the other hand, was based on theories about L1-L2 transfer effect, L1-L2 orthographic depth effect, hanzi learning, and vocabulary as well as Chamot and O'Malley's three-way learning strategy framework (Chamot & O'Malley 1990). Finally, the teacher's questionnaire (Appendix C) was designed to solicit teacher's belief, attitude, and the methods of teaching hanzi. All the questionnaires were in checklist form. Subsequent follow-up interviews provided insight on the participants' teaching and learning process and allowed the teacher and students an opportunity to explain and elaborate on their questionnaire responses.

Classroom observations allowed comparisons between answers on questionnaires to classroom behavior and provided first-hand information on how the class was taught and how students and the teacher negotiated the learning of hanzi. As a participant observer, I generally sat in the back of the class and took field notes, although with the teacher's permission, I would work with the students upon request. For example, when they were in need of a partner, I would play the part. I collected extensive field notes and documents, which included the course syllabus, weekly schedules, hanzi quizzes, classroom handouts, homework papers, and xeroxed copies of students' hanzi quizzes.

Results of Teacher Questionnaire and Interview

The data collected from the teacher questionnaire, interviews, classroom observation, and casual conversations after classes indicated that Lin Laoshi believed that listening/speaking should precede reading/writing, so she placed more emphasis on the aural and oral work in First Year Chinese.

Because of the requirement of the curriculum, in the third week of the first semester, she introduced hanzi to students. First she distributed a handout explaining the concept of radicals and the six principles (liushu) of hanzi formation. After that, students had to study hanzi on their own. The routines of weekly hanzi homework and quizzes described earlier had since then been established and continued throughout the whole year.

There were several reasons why Lin Laoshi did not teach hanzi in class nor use/design any activities or tasks beyond what was required of homework and quizzes. First, she felt that there was already too much to cover in the first year Chinese, she did not have the time to teach hanzi or the tools for analyzing them. Second was her belief that studying and memorizing hanzi should be an individual activity. Students must take the responsibility of internalizing hanzi on their own. Third; she felt that classroom activities or tasks, if any, would be an extra burden for the students, instead of providing them with more opportunities to use and practice

hanzi. Fourth was her belief that a critical mass of hanzi must be accumulated in the students' vocabulary repertoire before they could use them for communication. Students simply must go through the drudgery of building their own hanzi bank. Fifth came the readiness issue. This class of students, as compared to the intensive class, was believed to be not ready to produce anything in hanzi, other than taking the weekly quizzes. The sixth reason was that, because she felt sorry for her students who had to spend much time to learn hanzi independently, she was apologetic and tried to keep the learning or using of hanzi to the minimum. Finally she felt it was unfortunate that students had to learn the traditional instead of the simplified hanzi. In her opinion and based on her experience of teaching the simplified form of hanzi in another university, she felt that the traditional hanzi were much more complicated and harder to memorize than the former. Her mixed sentiments of empathy, pity, and the sense of being pressured to complete the prescribed curriculum surfaced many times during classes and during our interviews.

I found that the teacher's belief and attitude toward hanzi and the Chinese language in general had shaped the teacher-student role and interaction of this classroom. Because she felt sorry for students that Chinese was such a difficult language and the fact that she felt that this class was not "ready", the teacher did not expect them to do anything in hanzi. The Chinese language was treated as an academic subject, rather than a system for communication. The four skills were taught separately in distinct sequence and discrete points, and were tested as such. Although students sometimes were required to synthesize their skills and knowledge, such as putting grammatical and lexical knowledge into skits, they did not have to integrate the four skills and apply them beyond the scope of the textbook. I shall elaborate these points in the following sections.

Results of Student Background Questionnaire (Appendix D)

Among the fifteen students in the class, six were freshman, two juniors, four seniors, and three graduate students. Ten of them were majoring in business, one in science, one in engineering, one in music, and two were undecided. In terms of foreign language study experiences, this was a very sophisticated class because Chinese was the third language for all students; for two of them, it was the fifth language. Ten of them were native speakers of English, the rest included one Hungarian, two Indonesian, one Malay, and one Thai student. The Thai and Indonesian students were of Chinese descent, in addition to two Chinese-Americans who grew up in Cantonese-speaking families.

As far as their goals of studying Chinese were concerned, "to go about daily life in Chinese-speaking region" and "to do business in Chinese" were marked as most important (40% each), followed by "to be very fluent in Chinese" and "to read and write some basic Chinese for survival purposes"

(33.33% each), with "to learn the culture and the Chinese way of doing things" and "to make friends with Chinese people" trailing behind (13.33% each). None of the students checked to enjoy/study Chinese literature, philosophy, and arts, etc. or to read and write like an educated native speaker as important for them.

These students did not use computer programs to learn or practice Chinese. Slightly over half of the class (53.33%) said that they did not have opportunities to practice Chinese outside the classroom.

Half of the class felt that listening and speaking were more important, while the other half felt that all four skills were important. None stressed the importance of reading/writing skills alone. As to which skill was more difficult, 80% felt that writing was undoubtedly on the top of the list, second was speaking (20%), reading was next (13%), and listening was the least difficult (6.67%). (In some questions, students were allowed to check more than one answer as long as they were applicable to their situations.)

Most students spent a considerable amount of time studying Chinese outside the class. Sixty-six percent of students reported that they studied Chinese at least three days a week, with a total of 3-5 hours (53%). More than a quarter of the class spent more than five hours a week, with one student spending over eight hours per week. Did they feel that their performance in Chinese was in proportion to what they put in? Almost half of the class said that they felt that their performance was, a quarter felt somewhat, and 20% of the students felt not quite.

Results of Students' Strategy Use Questionnaire (Appendix E)

When students encountered any new hanzi, did they try to find something in them that they had already known? 80% of students answered yes, while 20% of them said no. What did they rely on, if yes? Most students reported copying them repetitively (44.44%), followed by looking for pictures, ideas, or familiar shapes (18.52%), associating them with English either by sound or meaning(11.11%), and using recurring phonetic indicators as clues (7.40%).

What metacognition learning strategies did they employ? 93.33% reported that they aimed for memorization, except for one student who audited the class. 86.67% of students said that they tested themselves on hanzi memorization, 13.33% said that they did not. How realistic was their expectation of their memorization effort? Slightly over half of the class (53.33%) said that they did not expect to have memorized the hanzi once they had studied them. The same percentage of students also admitted that they made a conscious effort to use hanzi whenever they could in tests, quizzes, homework, or in class, but not beyond.

Cognitively, how did they study hanzi? 80% of students answered that they did not categorize hanzi into groups. It came as no surprise, therefore, that 73% of students did not answer the following question which asked, if

they did, how they categorized hanzi. Of those students who answered the question, radical was on the top (13.33%), phonetic indicator and referential meaning, respectively, came as seconds (6.67%), and no one categorized hanzi by sounds (homophones). When they tried to memorize hanzi, equal numbers of students reported memorizing them as independent characters (e.g., as morphemes such as hua: flower; Cha: tea), or as compounds (huacha: jasmine tea). On the other hand, the majority of students (73.33%) said that it was easier to memorize hanzi by itself (as compound words), 13.33% as phrases, 6.67% as sentences, with one student not answering this question.

Sixty percent of students said that they read hanzi out loud when studying them, and 73.33% said that they translated word for word into English, or vice versa. In fact, 60% of students reported that they used English to study hanzi, noting that it was how the hanzi quizzes were designed.When they encountered new hanzi or new ways of using the hanzi that they had already learned, the majority did not take notes about the changes (73.33%). However, slightly over half of the class (53.33%) reported that they tried to create a "network" by associating hanzi with other hanzi in different contexts, while the others did not. Did it bother them if they did not recognize some hanzi in the sentence or passage they read? 80% said yes. Did they look over their errors and practice over them? 53.33% said yes, 46.67% said no.

Apparently most students agreed with the belief that studying hanzi was an individual effort (80%), although 13.33% expressed that they would like to study hanzi with other fellow classmates (One student did not answer this question.) Did they extend hanzi reading/writing into their daily life? 60% said no, 33.33% said yes, with 6.67% saying a little.

To the big question of whether they had found an effective way to study hanzi, 53.33% answered yes, 46.67% said no. How did they summarize their experience of studying hanzi? Challenging (86%) and time-consuming (80%) were on the top of the list, followed by satisfying (40%), frustrating (33.33%), and fascinating (20%).

Summary of Findings

The teacher under study is an experienced teacher who is caught between the reality of classroom and curricular demands. She knows that students must learn to develop oral proficiency before they can develop reading/writing literacy. However, she has to "teach" 600 hanzi in the first year of the program in order to prepare students for their second year of studying Chinese. On the other hand, she believes that her students cannot use hanzi before they have learned the 600 required for the course. As a result, her approach is to ensure the "teaching" (covering) of prescribed hanzi in the textbook but to ignore the retention and application of those hanzi

The students under study are sophisticated language learners. They know that they have to memorize hanzi, and they have employed motor-sensory skills of copying hanzi repetitively to achieve this goal. They also developed various ways such as using flash cards or making their own dictionary/glossary words to help them memorize hanzi. However, they tend to treat hanzi as a whole, without taking hanzi apart and tackling its components such as radical, phonetic indicator, sound, or shape as they would with English words. The implications of these findings will be addressed in detail in the following section.

Discussion

Based on the data collected through questionnaires, interviews, and classroom observations, it is clear that the program designers must re-examine the stated curricular goals and course syllabus against the type of students they are serving in their Chinese courses. According to the student background information, most of students did not plan to pursue a degree in Asian Studies or Chinese Literature. Instead, many of them came from engineering or business backgrounds. Their goals and purposes for studying Chinese and their needs for the type and degree of proficiency were very different from those students who had a literary or historical interest in Chinese-related studies, as mostly witnessed in previous generations of students of Chinese (CLTA Leadership Seminar discussion 1996).

Given the fact that this is a proficiency-based curriculum, as stated on the course bulletin, coupled with the consideration of students' needs, it is important to critically examine how Chinese is taught in the program. That is, is it treated as an academic subject that is to be studied, understood, and memorized, or as a communication system? The data of the present study indicated that Chinese was taught and studied as a linguistic system, in which the form of the language was explained and drilled. The assessment of students' progress was also on their knowledge about the linguistic system and how well they could control the production of the language within the scope of the textbook, rather than on how well they could do things with Chinese, an essential outcome of a proficiency-based program.

Student modality was heavy on listening with few opportunities to speak. Most listening and speaking took place in the form of a typical teaching move, i.e. teacher initiation/solicitation, student response, and teacher evaluation/comment (IRE) (Sinclaire & Clouthard 1975; Fanselow 1977; Mehan 1979; Chaudron 1988). Occasionally students asked clarification questions, however, almost all questions were asked in English, as were teacher's explanations. Very few interactional restructuring moves such as confirmation and comprehension checks and clarification requests (Pica 1987; Pica, Young, & Doughty 1987) could be coded. If they occurred, again, they were usually conducted in English. In fact, several students expressed the desire of engaging in "real conversation" to talk about themselves. One

student, PS (name initials), doubted his ability of carrying on a conversation with a native speaker other than their teacher. CL said that the skits they did in class could not be considered as "real speaking," because they got to write down what they wanted to say and were allowed to read the dialogues to the teacher. Another student, JE, even suggested that "we need more pressure to speak on the spot" (interview data).

Most reading activities derived from the textbook, sometimes with students repeating after the teacher, or students reading dialogues to each other. Oral reading was treated as hanzi or pinyin decoding activity, without any effort made on students' comprehension of the text. The only two times that any hanzi writing activity took place in class was when students had to copy individual hanzi from the textbook or the board onto their bingo worksheet in preparation to play the game. The bingo games, as acknowledged by the teacher and students, were played because of my presence and research inquiry. However, almost every student expressed an interest of playing more bingo games during the class. They commented that the game offered them an opportunity to interact with hanzi in a challenging and fun way.

When she wrote on the board, the teacher usually wrote only in pinyin. According to the teacher, she wanted to save time because writing hanzi took longer than in pinyin, in addition to saving students the aggravation or frustration of decoding hanzi. While her intention was sincere, the practice deprived students the opportunities of receiving input in hanzi. As Edelsky has strongly argued, the presence and use of meaning-making print materials are part of a literacy event , and students must be constantly exposed to meaningful print so that literacy in a L2 may begin to develop (Edelsky 1993). Some students in the study actually noticed the lack of use in hanzi. They commented, during the interviews, that they wished that the teacher would write more hanzi on the board. They felt that it would provide them a chance to test their reading ability, besides seeing how a native speaker would write hanzi in the right proportion and in correct stroke orders. They suggested that writing pinyin on the board was not necessary because the teacher would read the sentences anyway.

Did the outcome of the course align with students' needs and goals of taking this course? Keeping this in mind, the program designer needs to reassess whether or not requiring a beginning student of non-Chinese background to learn 600 hanzi in the first year, on top of trying to develop aural and oral proficiency in Chinese, is a reasonable goal. According to DeFrancis (1977), the number of the most essential hanzi is estimated to be 2,400. It is reported that it takes six years for children to master 3,000 hanzi in China (Serruys 1962:73 cited in Horodeck 1987). Leong's (1973:387 cited in Horedeck 1987) study states that students in Hong Kong learn 500-600 hanzi during each year of primary schooling. In Japan, students learn approximately 881 kanji in primary school (grades 1- 6), then 969 in grades 7-9 (Pye 1971: 3 cited in Horodeck 1987). If it takes so many years for children

to develop L1 literacy, why do we expect an adult L2 learner with a totally different linguistic and orthographic system to develop oral proficiency and literacy in such a short period of time? Is it reasonable to expect a teacher to accomplish so much? What does it mean that students "have finished a Chinese textbook and studied 600 hanzi"?

Because of the pressure of teaching 600 hanzi, this teacher felt forced to play the number game. She chose to use teacher-fronted approach with which she could maximize her control of the classroom interaction and content in order to ensure the completion of the prescribed curricular goals. Considering that she had to help students develop all four skills in sixty-four contact hours, she chose to concentrate on oral and aural skills, which could not be adequately developed given the shortage of input and the opportunity to push for output. Her class was textbook-driven, aimed at finishing the book, not on what or how well students could do with all the material covered during the year.

Besides the issue of learning new hanzi without heeding to the use of them, another bigger problem existed. That is, the retention of old hanzi. Almost all students reported that they were most frustrated by the fact that they could not retain the hanzi they had studied so hard. Thus, we need to draw on research and incorporate some theoretical factors into consideration in curriculum design and classroom teaching practices. For example, according to the information processing model, focal awareness is necessary for short-term memory store which, through practice and constant processing, will become permanent storage and automatic skills will be developed (McLaughlin & Heredia 1996). Both presence and frequency of input (Schmidt 1990) in meaningful and appropriate contexts are necessary conditions for retention and active use of hanzi. Furthermore, the literature cited earlier in this study supports the notion that oral proficiency aids the development of reading/writing literacy (especially in a deep orthographic system such as Chinese). It is essential that teachers create the contexts in which hanzi and oral Chinese can be used and practiced meaningfully and repetitively in various ways.

Research has consistently shown that classroom interaction is important in providing comprehensible input for students (Long 1980, 1983; Ellis 1980; Pica 1987; Pica, Young, & Doughty 1987). Teachers of Chinese need to examine their own teaching and classroom interactive patterns to see if they create contexts that allow for negotiation in the form of simplification, repetition, paraphrasing, clarification, and confirmation checks in oral Chinese and hanzi literacy. Because Chinese is not "in the air" in the daily life of the American society, the classroom often becomes the only place where students hear and speak some Chinese on a regular basis. However, the data of the present study indicated that most of the negotiation was conducted in English. Did students have enough opportunities to listen and negotiate meaning in Chinese? If aural and oral input was already in such paucity, compounded with the fact that the teacher felt that reading

hanzi in class was a waste of time and thus left hanzi learning and processing completely up to the students, then, the chance for students to develop literacy in hanzi was seriously diminished. If Chinese is, as it was categorized by the Foreign Service Institute (FSI), to be one of the most difficult languages for speakers of English to learn (Moore, Walton, and Lambert 1992), what we are doing is simply adding more load on students' shoulders and making the learning of Chinese harder than necessary.

Granted, learning and memorizing hanzi is an individual activity; however, I would argue that it need not be such a lonely and rugged journey. Teachers have the responsibility to help students build a bridge between their L1 and L2 so that some L1-L2 transfer would take place and the L1-L2 orthographic distance would be reduced. Research has shown that classroom interaction and input are important to students. Teachers need to recognize the power they possess over students' learning outcome. Long points out that the teacher's role is "the single most crucial element in determining how students perform" (Long 1984: 1). His argument can be examined from two perspectives. First, the teacher-student relationship in the classroom is unequal (Pica 1987). According to Fanselow (1977), and as was mentioned earlier, classroom interaction may be analyzed as a sequence of pedagogical "moves" in discourse, such as structure, solicit, respond, and react. Empirical data show that the pattern of teacher talk is 30-30-30-10, corresponding to solicitation-responding-reacting-structuring respectively, with students uttering mostly responding moves (Chaudron 1988). The IRE pattern also indicates that teachers get two turns while student gets only one turn, in addition to the fact that teachers control the floor through topic-initiation and nomination (calling on students) practices, among others. Second, how we teach our students will shape the kind of skills the students develop. For example, research has shown that students build a strong grammatical base if they are taught in grammar translation methods or audio-lingual methods because their attention has been drawn to syntactic structure of the TL (Sharwood Smith 1981).

The analysis of the data also indicates that the teacher should have taken advantage of what her students brought to the classrooms. As revealed by the questionnaires and interviews, these students were sophisticated foreign language learners. According to research in good language learners and learning strategy, the more prior experience a learner has in studying a foreign language, the better he/she learns another language (Ellis 1994). While the data of students' strategy-use and interview indicated that they knew how to study, they could have benefited more if they were provided with more hanzi learning strategies which will be elaborated later.

In the meantime, Lin Laoshi's notion of "readiness" is being seriously challenged by her students' background, experience, ability, and willingness to participate. That is, when do teachers know that students are ready to use hanzi for their own communicative purposes? In a three-year study on 29 limited-English-proficient children (3-10 years of age), Kleifgen and

Saville-Troike (1992) found out that a common linguistic code is neither necessary nor sufficient for coherent communication. They concluded that shared background knowledge, including prior experience, world and cultural knowledge, was the most critical element for successful communication. Therefore, they emphasized that code, content, and context are interwoven in the dynamics of communication; the contribution of linguistic, situational, and background knowledge cannot be separated. Although their study was focused on achieving oral communication in a multilingual classroom, the finding demonstrates that what students have brought with them will be resources on which communication may be drawn.

On the other hand, Pienemann (1985) proposes that L2 learners must go through developmental stages in processing certain linguistic structures in the L2. There are also a few fundamental psycholinguistic "processing prerequisites", i.e., learner's cognitive and affective needs, that must be met first. In the present study, nonetheless, Lin Laoshi insisted that her students were "not ready" to do anything in hanzi. By so believing, she failed to assign them with any real-life reading and/or writing activities in hanzi either in or out of the classroom. Lacking the opportunity to receive input and push for output in hanzi, students' cognitive and affective needs were not met in developing expertise in hanzi. This is rather unfortunate because the auto-input hypothesis (Schmidt and Frota 1986) suggests that a learner's own output becomes his/her input. Without making the connection between input and output, hanzi remained distant and marked in students' L2 interlanguage system.

Some students made a few suggestions to increase the use of hanzi in their lives. They said that they would like to write notes to each other and were willing to co-author, in class or as homework, stories in hanzi that they had learned or must memorize by heart. One student (KG) said that she wrote all her secret personal identification number (PIN) codes in hanzi, and another student (JK) said that he wrote down his lists of things to do in hanzi. If the teacher could capitalize on her students' willingness and readiness to use hanzi in real life, the learning of hanzi did not need to be such a drudgery.

PEDAGOGICAL IMPLICATIONS

Finally, I would like to propose a few points for teachers to help students improve their learning strategies in processing and retaining hanzi. As suggested by Higgs (1982), teachers can and should make the unavailable available, i.e. they need to help students convert input into intake (Corder 1978). Schmidt (1990) posits that intake is that part of input that learners notice. Research in the area of consciousness raising (Bialystok 1978; Rutherford & Sharwood Smith 1985; Schimidt 1990; Sharwood Smith 1981) and input enhancement (Rutherford 1987; White, Spada, Lightbown & Ranta 1991) has demonstrated that students may fail to perceive certain

structures in naturalistic input. When certain features in the TL are specifically taught and practiced, through conscious-raising activities, students' performance in the TL improves. When designing different classroom activities, tasks, homework, and assessment instruments, teachers need to pay attention to how the input they provide may affect students' rate of progress and the type of skills. The following is a list of suggestions which teachers could explicitly teach or discuss in class, particularly in the first few months when students are just beginning to learn hanzi. The first three are related to language learning in general, while the fourth is concerned specifically with learning hanzi.

A. *Encourage students to develop their own self-monitoring system.* One important learning strategy identified by researchers in this area is the employment of a self-monitoring system (O'Malley and Chamot 1990; Ellis 1994). Many students in this study reported that they used flash cards or created their own dictionary system to practice and to test themselves. One helpful example included the making of "dazibao," putting hanzi in big letters and posting them on the wall in the dorm.

B. *Teach students to adopt "good language learner" strategies* (Ellis 1994). The strategies include paying attention to form and monitoring one's own and other's speech, attending to meaning, being flexible, focusing on meaning or form at different times, being actively involved in language learning, being "active" in the classroom, and engaging in "silent speaking" or "silent writing" in their mind, striving for high-quality participation and output, being aware of their own learning process and progress by assessing their own needs, evaluating progress, giving direction to their learning, determining how they are going to tackle a certain learning task, and controlling their own learning. Students should also develop multiple ways to study according to different task demands and situations. They should take advantage of their general prior knowledge, classroom experiences, and that of the Chinese language.

C. *Help students apply Chinese in real-life situations.* Teachers need to encourage students to use an experiential approach to complement the analytical approach (Harley 1993). With the former, students use or immerse themselves in the TL as a tool to learn other subject-matter, while with the latter, students focus on specific features of the TL. Students need to understand that classroom instruction contains the following characteristics: limited time, focus on form, patterned drills, limited input, teacher talk, one person input, and an instructional/syllabus-based orientation. On the other hand, naturalistic learning experiences may include real-life tasks, natural negotiations, unlimited input, foreigner talk, multiple interlocutors, and with a communication orientation. Students should be encouraged to make the use of Chinese a part of their life. Given that Chinese is not ubiquitous in American society, teachers have the added responsibility of creating contexts in which students have to use Chinese and thus, activate their linguistic knowledge and develop sociolinguistic competence.

Examples include leaving or taking phone messages, or writing notes/cards/e-mail messages in Chinese to a classmate or the teacher.

D. *Help students develop their own learning strategies to process hanzi.* As Brown and Perry's (1991) research suggests, the deeper a person processes information, the more he/she will remember. Students should be encouraged to look at the similarity, in addition to the differences, between hanzi and English. For example, individual hanzi can be taken apart by radicals or phonetic indicators, just as there are prefixes, stems, or suffixes in English. Once we learn the parts, it will become easier to tackle the whole, although the sum of all parts may not always equal the whole. In this way, the L1-L2 transfer will take place in terms of processes, and the interrelationship between shapes, sounds, and meanings will be played out and strengthened over time.

At the individual hanzi level, instead of asking students to copy hanzi mechanically, encourage them to do things with hanzi. Students need to be aware that the more they categorize, network, compare and contrast hanzi, the more they will remember. As they engage in these cognitive activities, the learning of hanzi will also become less tedious and more interesting in the process. For example, students may learn to put all hanzi with the same radicals or phonetic indicators together, while comparing and contrasting their similarities and differences in terms of pronunciation, shape, number of strokes, meaning, and usage. Because Chinese has many homonyms, it would be helpful to compare words with similar or identical sounds or tones. Students can also put words with similar shapes together to compare.

At the compound/word level, students may be introduced to the "building block" concept of hanzi. For example, an individual hanzi can be a morpheme stem, to which different prefixes or suffixes may be attached to form new words. Once students are aware of the concept of word formation in Chinese, they will be able to remember many new words without having to learn all hanzi in the compound. In addition, they will have the chance to review old hanzi and learn their various new combinations.

Students should be introduced to peg-word, key-word or the semantic-keyword methods (Thompson 1987; Brown & Perry 1991), as well as be encouraged to come up with their own mnemonic or iconic methods (Cohen & Aphek 1981). For example, the radical-phonetic indicator learning method is similar to the peg-word method, because radicals and phonetic indicators can be used as cues with which vocabulary categories in the L2 can be built. Because most words in Chinese are bimorphemic or polymorphemic, these compounds may be learned either by themselves as words or by peg-word method. For example, *xue* may be used as the peg or semantic category, which means to study. Thus, *xuesheng* is a "student," *xuexiao* a "school," *xuexi* to "study," and *xuewen* "knowledge." All these words containing the morpheme *xue* and are related to "study" in a certain way, so these words may be learned as vocabulary words or compounds stem-

ming from the peg *xue*.

The key-word method may involve using pictographs and ideographs as links between pictures and/or ideas to meaning and graphemic information carried in hanzi. In fact, because of the use of pictographs or ideographs is fun and attractive, it often becomes the source of misconception that hanzi is like "pictures." It is thus important to point out to students that pictographs and ideographs constitute only five percent of hanzi (Moore, Walton, and Lambert 1992: 56), although they may serve as an interesting point of departure.

Phonological mediation can be an example of key word-semantic method. By activating sounds in short-term memory (bottom-up and visual information), it involves the use of top-down processing (oral proficiency and phonological mediation) and triggers what is stored in long-term memory about the sound-meaning of the hanzi. English words may be used to associate with some hanzi either through sound or meaning. For example, "too" (meaning excessive as in too much) is pronounced as "tai" in Mandarin Chinese, which sounds similar to the English word "tie," when you wear a tie, you'll feel "too" tight.

Repeating or copying hanzi may be necessary but is not sufficient. Using them in contextualized sentences or discourse will increase the frequency of these hanzi being used in a meaningful way, and help students gain real control of grammatical usage, cultural connotation, and sociolinguistic competence. The edited writing samples can be used for reading material on which reading comprehension tasks may be developed. When students read or write about themselves and for a real audience for authentic communicative purposes, the texts will be contexualized in a more meaningful way (Edelsky 1993). In the process, students will have to rely on their memory bank for hanzi, which will be activated instead of laying dormant. Most important, when students read or write in discourse, their oral proficiency and phonological mediation will be called on for processing, thereby employing top-down, not just bottom-up, processing mechanisms.

Finally, the class could spend some time discussing how students process hanzi. The more they can share their strategies, the more creative they will become. Many teachers of Chinese worry that if students use the "wrong" methods to memorize hanzi they will develop misconceptions about the origin or formation of hanzi . However, etymology is an academic pursuit; students are not required to know the historical changes that occurred in hanzi. For the majority, their goal is to memorize, retain, and use hanzi; how they achieve that aim is a personal strategy and journey.

Conclusion

Because hanzi is often the area of most difficulty for L2 learners of Chi-

nese, this paper has examined what teaching approaches the teacher takes and what learning strategies students adopt in order to tackle this problem. Additionally, I examined classroom interaction and activities in order to find out if or not the learning of hanzi could be facilitated.

I have also made some suggestions to program designers to re-examine if studying 600 hanzi is a reasonable goal in first year Chinese for students of non-Chinese background. I called for program designers and teachers to re-evaluate the role of the student, who should be treated as an active learner and user of Chinese, instead of someone who only waits and absorbs linguistic knowledge about Chinese. Finally, in addition to offering some specific suggestions to teach hanzi, I asked teachers to re-examine the classroom instruction and interaction. Because the products of students' learning will be shaped by instructional approaches and philosophy, teachers need to heed the issue of aligning instruction with the former's goals. Eventually, the success of language programs depends not on how many words students can memorize, but on whether or not they are able to do things in the language under study.

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Appendix A

Student Background Questionnaire

All the information on this questionnaire will be kept confidential.

1. Name_____
2. Phone number(area code) _____
3. E-mail_____
4. Address _____
5. School and major _____
6. Are you a: Freshman____; sophomore ____; Junior _____; Senior _____
7. Your gender is: Male _____; female _____
8. What Chinese course are you enrolled _____
9a. What is your native language? _____
9b. Have you studied another foreign language? When? For how long? Whatlanguage(s)?

_____

10. Why are you taking Chinese? List as many reasons that apply to your situation:

_____

11. In your case, which skills are more important than the others? Check the appropriate answer(s):

a. listening and speaking are more important than reading and writing _____
b. reading and writing are more important than listening and speaking _____
c. all four skills are equally important _____

12. In terms of your goals and according to their importance, please rank the following items from 1 to 5 (1 being the most important and 5 the least):

____ a. to go about your daily life in a Chinese-speaking region
____ b. to be very fluent in Chinese
____ c. to read and write some basic Chinese for survival purposes
____ d. to read and write like an educated native speaker
____ e. to do business in Chinese
____ f. to learn the culture and the Chinese way of doing things
____ g. to enjoy/study Chinese literature, philosophy, and arts, etc.
____ h. to make friends with Chinese people

13. Do you have opportunities to use/practice Chinese outside the classroom?
Yes ____; No ____

14. Do you use computer to learn/practice Chinese?
Yes ____; No ____

15. If yes, what programs or internet service do you use for Chinese? Please list all that you have been using:

_____

16. On the scale of 1-5 (1 being the most difficult and 5 the easiest) and based on your experience of learning Chinese, how would you rate the difficulty of Chinese?
1 ____; 2 ____; 3 ____; 4 ____; 5 _____

17. For you, what skill is the most difficult to acquire? Please rank them according to the degree of difficulty (1 being the most difficult and 4 being the easiest. You can also give them the same number if you feel that they are equally difficult or easy):
Listening ____; Speaking ____
Reading (hanzi) ____; Writing (hanzi) ____

18. How many days per week do you practice hanzi?

_____

19. On the average, how much time do you spend on learning/practicing hanzi each time you work on it?
15 minutes ____; half an hour ____; 1 hour ____; 2 or more hours ____

20. Do you think your performance in Chinese is in proportion to what you have invested in it?
Yes ____; somewhat ____; not quite ____; definitely not _____

21. When will you be available for an one-half hour interview?

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Appendix B

Student Strategy-Use Questionnaire

This questionnaire is interested in finding out what you do to learn hanzi. Please focus your response on the learning of Chinese characters. Mark the items with a *V* when they apply.

1a. When you encounter any new hanzi that you have to learn, do you try to find something in them that you have already known?
Yes ____; No ____
1b. What do you rely on?
radicals ____; phonetic indicators ____;
make pictures/ideographs ____; copy them repetitively ____;
associate the hanzi with English either by sound or meaning ____;
acting out ____; others _____
2. When you learn a new hanzi, do you strive to memorize it?
Yes ____; No ____
3. Do you test yourself to see if you memorize the hanzi?
Yes ____; No ____
4. Do you expect yourself to memorize the hanzi as soon as you studied them?
Yes ____; No ____
5. Do you make a conscious effort to use the hanzi you have learned?
Yes ____; No ____
6a. As you are learning new hanzi, do you categorize hanzi into groups?
Yes ____; No ____
6b. If you do, how do you categorize them?
By radical ____; by phonetic indicator ____;
by sound ____; by meaning _____;
Others (please indicate) _____
7. Do you memorize hanzi by individual characters or by compounds?
For example, (1) da4: big; xue2: to study; sheng1: a child—da4xue2sheng1: a big student, so, a college student. Or,
(2) da4xue2sheng1: college student.
By individual character ____; By compounds ____
8. Do you try to read out loud when studying hanzi?
Yes ____; No ____
9. Do you translate word for word in studying hanzi?
Yes ____; No ____
10. Do you take notes on any new hanzi or new ways of combining the hanzi that you have learned?
Yes ____; No ____
11. When you are studying a new hanzi, do you try to create a 'network'—by associating that hanzi—with other hanzi in other contexts?
Yes ____; No ____
12. Do you find it easier to memorize hanzi by itself or by using it in a phrase or sentence?
individual hanzi ____; phrase ____; sentence ____
13. Do you use any English to learn hanzi?
Yes ____; No ____
14. When you read texts written in hanzi, does it bother you if you don't recognize some of the hanzi in the sentence or passage?
Yes ____; No ____
15. Do you like to study hanzi by yourself or with a group of classmates?
By yourself ____; With a group ____

16. When the teacher give back your homework or tests, do you look at your errors and practice over them?

Yes ____; No ____

17. Do you try to use/read/write the hanzi you have learned in your daily life?

Yes ____; No ____

18. In your teacher's teaching of hanzi, what activities do you like most or find most useful?

---

19. In general, do you think you have found an effective way to learn hanzi?

Yes ____; No ____

20. Finally, how would you describe your experience of learning hanzi (mark whatever it applies):

Satisfying ____; challenging ____; fascinating ____;
time-consuming____; frustrating ____

The information you provided will be extremely important and useful for my research. Thank you for your time and cooperation. Good luck with your study of Chinese.

Appendix C

Teacher Questionnaire

1. Your name: _____
2. School: _____
3. Course Title: _____
4. You address (including zip code): _____
5. Phone number (including area code): _____
6. e-mail: _____

Please mark a check V in the appropriate space provided:

7a. If you are a native speaker of Chinese, please continue this item (otherwise, please go to 7b). You were raised in:

U.S. _____; China _____; Taiwan _____;
Hong Kong _____, or other place (please indicate)_____

7b. If you are not a native speaker of Chinese, you are a native speaker of _____

8a. Do you believe that speaking and listening should precede reading and writing hanzi?
Yes_____; No_____

8b. If yes, do you prioritize the development of oral proficiency over reading/writing literacy in the first semester?
More oral/aural work ____, equal emphasis ____;
More reading/writing work ____

9. When do you start teaching hanzi during the first semester?
in the first week_____, after pinyin is taught? _____
other time (Please indicate approximately which week) _____

10. As a general rule, when you introduce hanzi in class, do you analyze them?
yes _____; No _____

11. Do you often encourage students to analyze hanzi as much as possible?
Yes _____; No _____

12. Do you teach students how to analyze hanzi?
Yes ____; No ____

13. If you analyze hanzi, what kind of association do you make?
classical etymology _____, ideographs _____;
radicals _____; phonetic parts _____;
or others, what are they? _____

14. Do you feel that learning/practicing hanzi is an individual effort?
yes _____; No _____

15. Do you expect students to memorize hanzi?
Yes _____; No _____

16. Do you set special time for hanzi learning/practicing in class?
Yes _____, No _____

17. How often do you quiz/test hanzi in class?
Daily _____, Weekly _____; by-weekly _____;
Others (please specify) _____

18. How do you treat hanzi ? each character is:
as a word _____, as a morpheme _____

19. How do you teach hanzi?
teach them as individual character _____;
teach them in compounds _____

20. Do you feel that stroke order is important in writing hanzi (in the scale of 1-5, 1 being the most important and 5 the least important)?
1 ____; 2 ____; 3 ____; 4 ____; 5 ____

21. Do you feel that reading out loud will help students process hanzi?
Yes _____; no difference _____; No _____

22. How soon in the course do you believe that students should be asked to read or write texts in hanzi?
At the beginning of the course _____; After pinyin is finished _____;
Other time (please specify) _____

23. Do you use any task or activity to help students practice hanzi?
Yes _____; No _____

24. Do you advise students to use computer programs to practice hanzi?
as a requirement ____; as a recommendation ____; not at all _____

25. Do you advise students to use hanzi (not as homework) outside the classroom?
as a requirement ____; as a recommendation ____; not at all _____

Please give me a complete sample of one of your hanzi instructional units that is representative of your teaching and assessment of hanzi. Thank you for your cooperation and assistance.

Appendix D

Students' Background Results

1.	Characteristics		
	a. Freshman	6	40%
	b. Sophomore	0	0
	c. Junior	2	13.3%
	d. Senior	4	26.67%
	e. Graduate School	3	20%
	f. male	10	66.67%
	g. female	5	33.33%
2.	Studied another langauge	15	100%
3.	Native Langauge		
	a. English	10	66.67%
	b. Hungarian	1	6.67%
	c. Indonesian	2	13.33%
	d. Malay	1	6.67%
	e. Thai	1	6.67%
4.	Ethnic Chinese background		
	a. Yes	5	33.3%
	b. No	10	66.67%
5.	Which skills are more important?		
	a. listening & speaking	8	53.33%
	b. reading & writing	0	
	c. all four skills	8	53.33%
6.	Goals		
	a. to go about daily life in a Chinese-speaking region.	6	40%
	b. to be very fluent in Chinese	5	33.33%
	c. to read and write some basic Chinese for survival purposes	5	33.33%
	d. to read and write like an educated native speaker	0	
	e. to do business in Chinese	6	40%
	f. to learn the culture and the Chinese way of doing things	2	13.3%
	g. to enjoy/study Chinese literature, philosophy, and arts, etc.	0	
	h. to make friends with Chinese people	2	13.33%
7.	Opportunities to practice Chinese outside the classroom		

	a. Yes	7	46.67%
	b. No	8	53.33%
8.	Use computer to learn/practice Chinese	0	
9.	How difficult is Chinese?		
	a. most difficult	5	33.33%
	b. difficult	7	46.67%
	c. somewhat difficult	1	6.67%
	d. not too difficult	2	13.33 %
	e. easy	0	
10.	Which skill is the most difficult to acquire?		
	a. listening	1	6.67%
	b. speaking	3	20%
	c. reading	2	13.33%
	d. writing	12	80%
11.	Do you think your performance is in proportion to what you have invested in it?		
	a. yes	7	46.67%
	b. somewhat	4	26.67%
	c. not quite	3	20%
	d. definitely no	0	

Appendix E

Student Strategy Use Results

1.	try to find something in the hanzi		
	a. yes	12	80%
	b. no	3	20%
	c. radicals	4	14.81%
	d. phonetic indicators	2	13.33%
	e. pictures/ideographs	5	18.52%
	f. English	3	20%
	g. copy repetitively	12	44.44%
	h. acting out	0	
	i. others	1	6.67%
2.	I try to memorize them		
	a. yes	14	93.33%
	b. no	1	13.33%
3.	I test myslef on hanzi memorization.		
	a. yes	13	86.67%
	b. no	2	13.33%
4.	I expect to memorize a hanzi character once I study it.		
	a. yes	7	46.67%
	b. no	8	53.33%
5.	I make a conscious effort to use hanzi		
	a. yes	8	53.33%
	b. no	7	46.67%
6a.	I categorize hanzi into groups		
	a. yes	2	13.33%
	b. no	12	80%
6b.	I categorize hanzi by		
	a. radicals	2	13.33%
	b. phonetic indicator	1	6.67%
	c. sound	0	
	d. meaning	1	6.67%
	e. no answer	11	73.33%
7.	I memorize hanzi by		
	a. individual hanzi	8	53.33%
	b. compounds	8	53.33%
8.	I read hanzi out-loud when I study them.		
	a. yes	9	60%
	b. no	6	40%
9.	I translate word-for-word in studying hanzi.		
	a. yes	11	73.33%
	b. no	4	26.67%

10.	I take notes on new hanzi or new ways of using hanzi that I have learned.		
	a. yes	4	26.67%
	b. no	11	73.33%
11.	I try to create a "network" by associating hanzi with other hanzi in other contexts.		
	a. yes	8	53.33%
	b. no	6	40%
	c. no answer	1	6.67%
12.	I find it easier to memorize hanzi		
	a. by itself	11	73.33%
	b. in phrases	2	13.33%
	c. in sentences	1	6.67%
	d. no answer	0	
13.	I use English to learn hanzi.		
	a. yes	9	60%
	b. no	7	46.67%
14.	It bothers me to not recognize some hanzi in the sentence of passage I read.		
	a. yes	12	80%
	b. no	3	20%
15.	I like to study hanzi		
	a. by myself	13	86%
	b. with others	2	13.33%
	c. no answer	0	
16.	I look at my errors and practice them over		
	a. yes	8	53.33%
	b. no	7	46.67%
17.	I try to use/read/write hanzi in my daily life.		
	a. yes	5	33.33%
	b. no	9	60%
	c. a little	1	6.67%
18.	I have found an effective way to study hanzi.		
	a. yes	8	53.33%
	b. no	7	46.67%
19.	I found my experience of studying hanzi		
	a. satisfying	6	40%
	b. challenging	13	86.67%
	c. fascinating	3	20%
	d. time-consuming	12	80%
	e. frustrating	5	33.33%